Greater Silicon Valley
Trading Area Market Analysis
Update
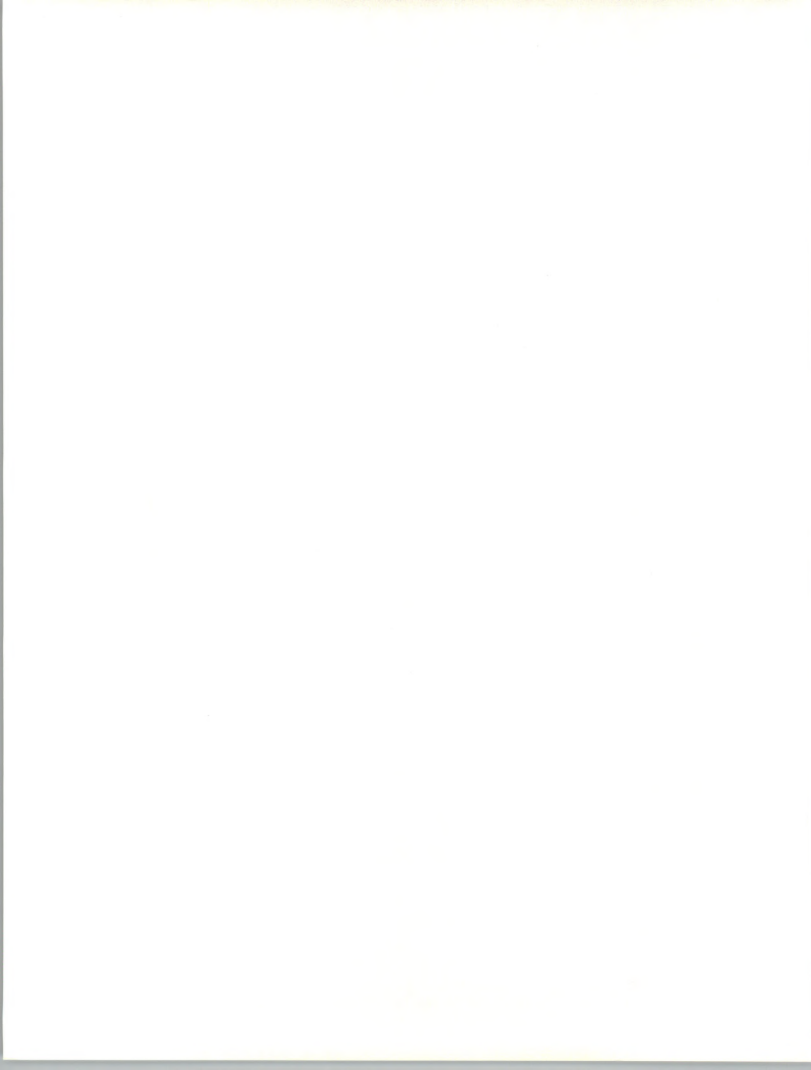
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2/4/92

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Greater Silicon Valley Trading Area Market Analysis—Update

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Original Study Objectives

- Provide an estimate of market sizes for key service sectors
- Estimate growth rates for key service segments
- Prepare a local competitive analysis
  - Identify key local competitors
  - Determine areas of penetration
  - Assess IBM's position

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Scope
Geographic/Industry

- Geographic
  - Santa Clara, Monterey, Santa Cruz, San Benito counties
- Industry sectors

  Emphasis on:

  - Discrete manufacturing
  - State and local government
  - Education
  - Health care

  All sectors (except federal) included for complete perspective

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Scope
Market Segments

Markets	Market Segments
Professional Services	Applications development Project management Systems programming Software installation Education Executive consulting
Systems Integration	Applications integration Network integration Infrastructure integration
Systems Operations	Platform operations Applications management
Network/Processing Services	*Excluding*: Transaction processing, electronic information
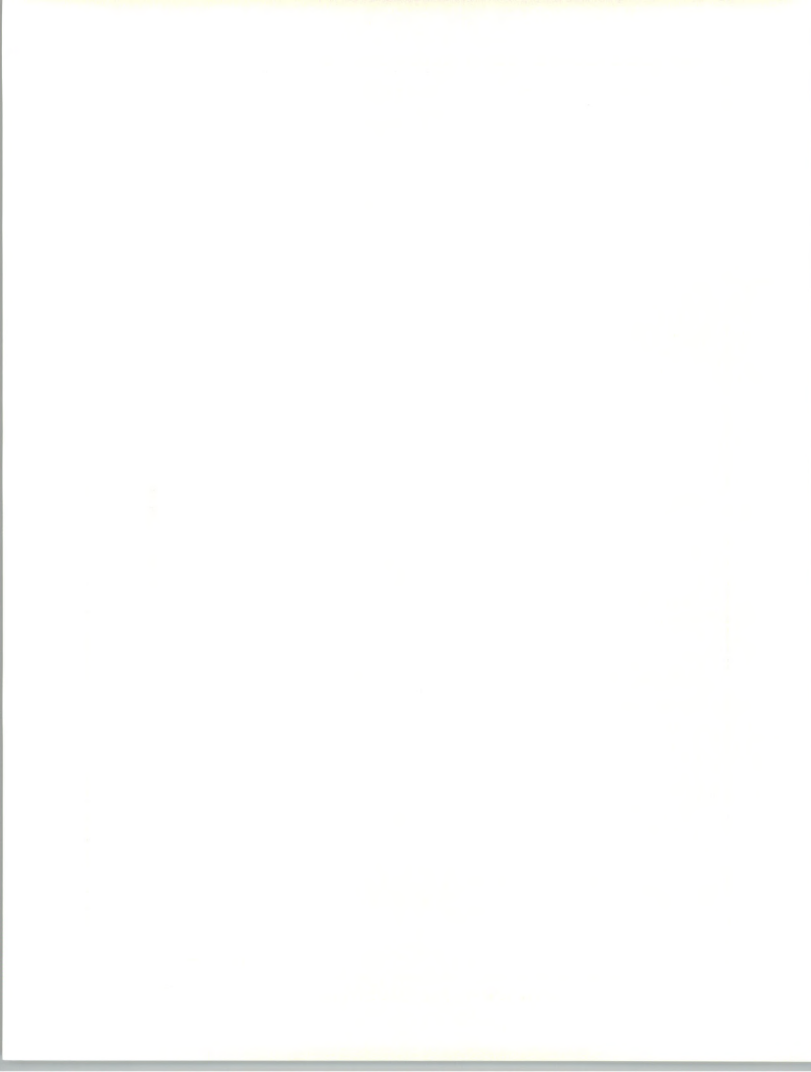
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Study Update

- Adjusted
  - Market sizes
  - Growth rates
- Utilizing INPUT's 1991-1996 forecast
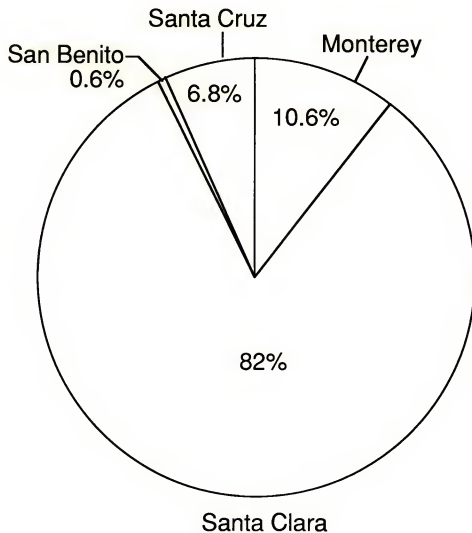
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Methodology
Overview

- Utilized outside and proprietary data sources to:
  - Develop demographic model of T/A by industry
  - Develop targeted list of interview candidates
- Utilized INPUT's 1990 forecast and proprietary methodology to develop preliminary market sizing
- Conducted end-user interviews to refine market sizing

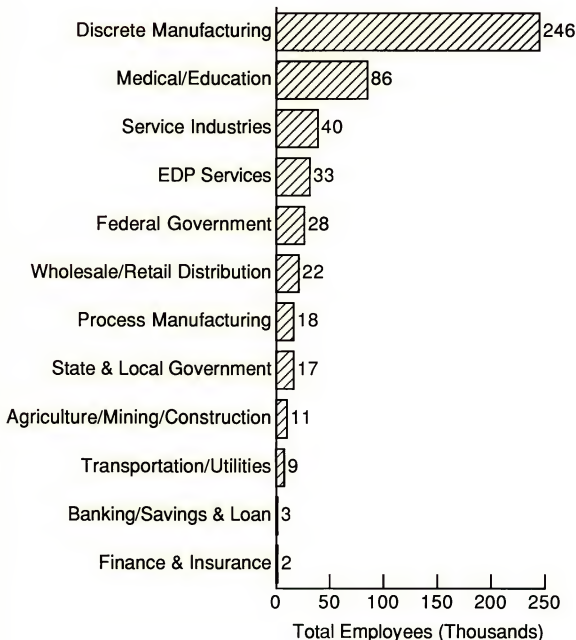**INPUT**

Demographics
Peninsula Trading Area

Firms by County

Total firms = 1,232

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Demographics
Peninsula Trading Area
Employees by Industrial Sector

Industrial Sector	Total Employees (Thousands)
Discrete Manufacturing	246
Medical/Education	86
Service Industries	40
EDP Services	33
Federal Government	28
Wholesale/Retail Distribution	22
Process Manufacturing	18
State & Local Government	17
Agriculture/Mining/Construction	11
Transportation/Utilities	9
Banking/Savings & Loan	3
Finance & Insurance	2

Total Employees (Thousands)

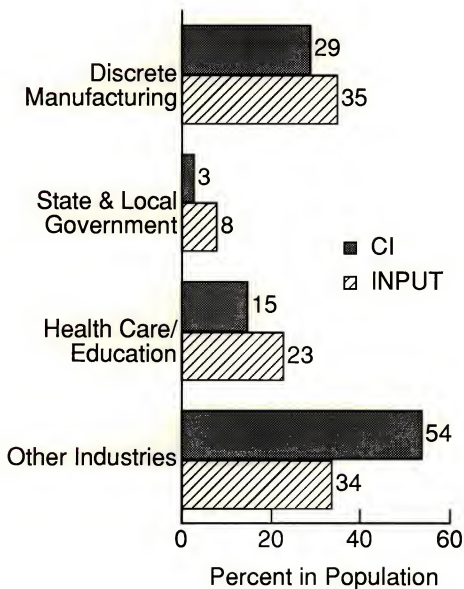Data Source: *Computer Intelligence Data Base*

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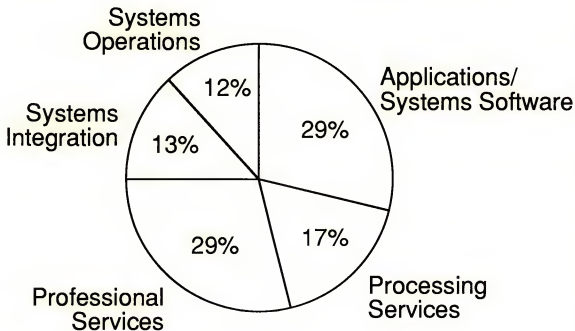# Demographics
Peninsula Trading Area

Percent Firms in INPUT Sample
vs. CI Population

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General Sample Characteristics

- Demographics:
  - Average budget = $9.7 million
  - 53% Development/maint., 37% Operations, 10% Mgt./Other
  - 50% have systems developed or maintained outside IS
- Outside information services expenditures:
  - Average outside information services = $980 K (10%)
  - Broken down as follows:

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Demographics—Comments
Not Necessarily News

• Total area business environment has extremes
  - A few very large firms
  - Lots of Moms and Pops
• Lack of significant firms in financial sectors
  - Headquartered out of the area
  - Dominated by LA and San Francisco companies
• Manufacturing highly specialized—high tech
• Heavy concentration of workstation MIPS
• Dominated by manufacturing
• Disproportionately high ratio of minis to mainframes
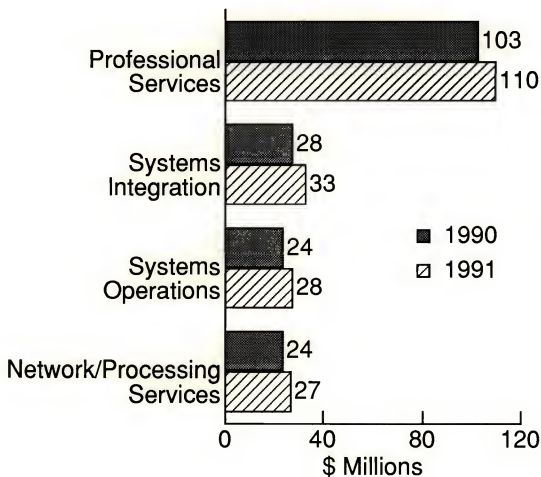• Heterogeneous hardware environment

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Market Sizing/Forecasts
Overview

- Market segment sizes and forecasted growth
- INPUT's observations on survey data
- Other significant findings from user surveys

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Trading Area Market Sizes
(Adjusted)

Category	1990	1991
Professional Services	103	110
Systems Integration	28	33
Systems Operations	24	28
Network/Processing Services	24	27

$ Millions (0 40 80 120)

■ 1990
▨ 1991

1990 Total = $179 Million
1991 Total = $198 Million

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Market Parameters
Professional Services

1991 market size:	$110 Million	
Growth rate:	7%*	
1993 market size:	$131 Million	

Market Segment	$ Millions	%*
Executive Consulting	24	13
Project Management Applications Development Software Installation Systems Programming	69	9
Education	17	8

* Compound Annual Growth Rate 1991 - 1993

Education   Executive Consulting

15%   22%

63%

Project Mgt., Appl. Dev., etc.

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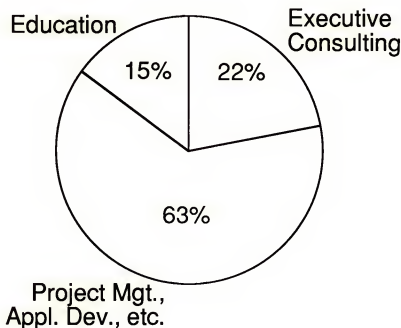
Breakout of Professional Services for a Typical Sample Respondent

	$ Thousands	Percentage
Applications Development	134	47
Education	91	32
Executive Consulting	23	8
Systems Programming	20	7
Software Installation	11	4
Project Management	6	2
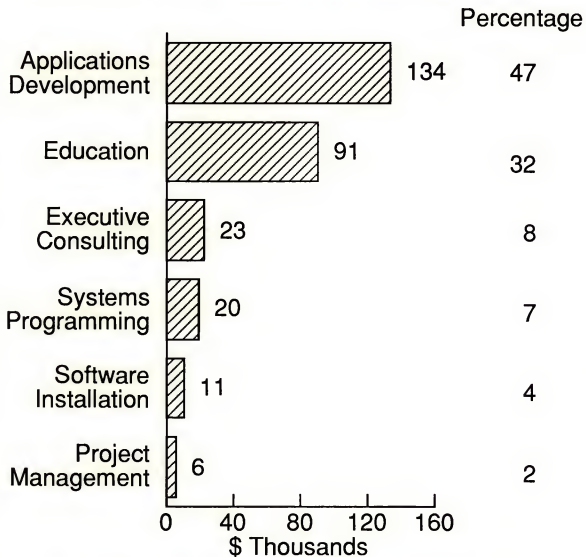
Two largest categories heavily correlated with package vendors

Growth over the next three years

- 55% see budgets increasing by 29% on average
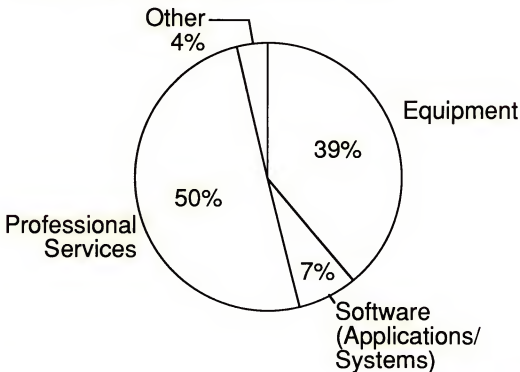- Only 11 % see budgets decreasing

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Market Parameters
Systems Integration

1991 market size:	$33 Million
Growth rate:	18%*
1993 market size:	$46 Million

Market Segment	$ Millions	%*
Equipment	13	19
Software (Applications/ Systems)	2	26
Professional Services	17	19
Other	1	18

* Compound Annual Growth Rate 1991 - 1993

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Respondents' Views on Systems Integration

- 7% have used integrators over the past three years
- $900K was the average project size measured by the sample
- Key respondents in the sample included:
    - County of Santa Clara—Transportation
    - Northern Telecom
    - GE Nuclear Energy
- 16% indicated future intent to utilize an integrator
    - 81% Probability—Applications Integration
    - 75% Probability—Infrastructure Integration
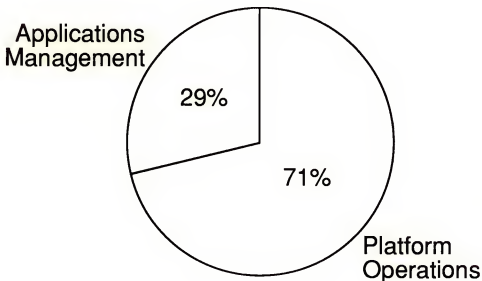   - 69% Probability—Network Integration

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Market Parameters
Systems Operations

1991 market size:	$28 Million
Growth rate:	17%*
1993 market size:	$38 Million

Market Segment	$ Millions	%*
Platform Operations	20	18
Applications Management	8	16

* Compound Annual Growth Rate 1991 - 1993

Applications Management 29%

Platform Operations 71%

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Respondents' Views on
Systems Operations

- 9% have utilized an SO firm over the past three years
- $750K is the average annual contract size
- Key respondents in the sample included:
    - ASK (tied to EDS investment)
    - El Camino Hospital
    - BT/Tymnet
    - County of Santa Clara—Transportation
- 13% indicated future intent to consider SO (3-year horizon)
    - 69% Probability—Traditional FM
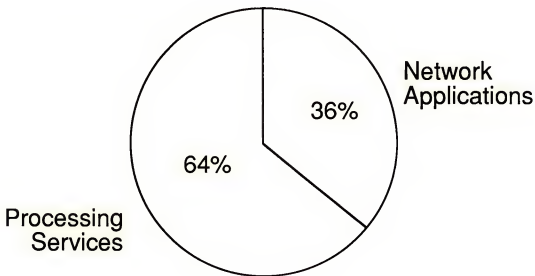   - 31% Probability—Applications Management

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Market Parameters
Network and Processing Services

1991 market size:	$5 Million
Growth rate:	15%*
1993 market size:	$7 Million

Market Segment	$ Millions	%*
Processing Services	3	10
Network Applications	2	20

* Compound Annual Growth Rate 1991 - 1993

Network
Applications

36%

64%

Processing
Services

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Summary and Conclusions
Market Segments

- Professional Services:
  - Strong preferences for package vendors
  - Use of independents with highly specialized expertise
  - Heavier use of small contractors than industry in general
- Systems Integration/Systems Operations:
  - Generally picked for industry application or functional expertise
  - Application integration the most common area of need
  - SO contracts likely to be smaller than national averages
- Network/Processing Services:
  - General timesharing use declining
  - Includes disaster recovery services
  - VAN market small based on sample data
  - EDI highly significant

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Local Industry Observations
Discrete Manufacturing

- Largest sector in terms of employment and revenues

- Large employers associated with the information systems industry

  - Lockheed   - AMD
  - Hewlett-Packard   - Intel
  - Northern Telecom   - National Semiconductor
  - Rolm   - Varian

- Less use of outside consultants than national averages

- Minimal interest in systems integration and systems operations

- Applications software requirements highly specialized

- Professional services needs tend to be industry specific

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Local Industry Observations
Process Manufacturing

- No heavy or extremely large industry
- Food processors are a large part of the market
- Low IS intensity compared to national average

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Local Industry Observations
Medical and Education

- No major local medical buying points
  - University hospitals self-sufficient
  - Few chains
  - Some use of SO with specialized suppliers
- Large universities are small markets
- Local schools are heavily constrained
  - Budget crisis
  - Competitive/cost-driven bidding procedures

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Local Industry Observations
State and Local Government

- Very few major buying points
- Same budget and bidding constraints as education
- Strong preference for independent contractors
  - Cheaper
  - Focused expertise

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Competitive Analysis

- General observations on vendors—from user survey
- INPUT's analysis of key local vendors*
- Summary and conclusions

* Available in original study. Not included in this presentation

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General Observations on Vendors

- Systems programming support almost exclusively from...

  - Hardware vendors

  - Package vendors (Oracle, etc.)

- Accounting firms have less than average market
  However: Dominate executive consulting

- Extremely heavy use of "brokering" vendors for agency-based independents

  - Far West Consulting

  - CRG

  - Disabled Programmers

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Vendor Profile
Andersen Consulting
Local Characteristics

- Market Focus
  - Emphasis on front-end consulting
  - Not as prominent as other geographies
  - Taking initiative on "applications management"
  - Key verticals—manufacturing, services
- Directions
  - Bay Area possible SO target
  - SO processing center through SO contract
  - Leverage high-tech relationships through Japanese practice

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Vendor Profile
DEC
Local Characteristics

- Market Focus
  - High-tech manufacturing is key
  - Telecommunications and services follow
- Local Sales Approach
  - Field sales matrixed against San Jose DCC
  - San Jose DCC significant market advantage
  - Local alliance with Deloitte for manufacturing
  - Special initiative in "silicon" manufacturing
- Directions
  - Expansion of technical expertise (DCC)
  - Possible valley location for new consulting organization
  - Increased integration with other DCCs *(Virtual demonstration capability)*

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**Vendor Profile
EDS
Local Characteristics**

- Market Focus
  - Manufacturing, state & local government key
  - Growing interest in retail distribution
  - Primary market segment is SO
- Local Sales Approach
  - Coordination managed from Sacramento
  - Industry oriented sales staff in SF/LA
  - Heavy reliance on reference sell
  - Relationship with ASK/Ingres important
- Directions
  - Increased emphasis on discrete manufacturing
  - Possible network node site
  - Possible showcase for distributed capabilities
  - More local marketing presence

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Conclusions
Recommendations

Subject Area	Conclusions/Recommendations
Area Markets	*Conclusions* - Geographically dominated by Santa Clara - Dominance by computer industry firms - Opportunities smaller than national average - Currently depressed by recession - Some sectors show significant growth opportunities *Recommendations* - Consider vertical industry delivery approach - Re-examine targeted industries: services, EDP services, and distribution appear to have potential

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Conclusions
Recommendations

Subject Area	Conclusions/Recommendations
Products/Services	*Conclusions*
	- Heavy reliance on package suppliers
	- Applications development key expenditure area
	- Education disproportionately high vs. national averages (Dominated by hardware and software vendors)
	- SI/SO have good potential with larger firms and specific industries
	- Body shop business more price sensitive than some other markets and is highly specialized
	Recommendations
	- Invest in vertical consulting expertise for high-tech manufacturing
	- Build integrated offerings for target industries
	- Include IBM's network capabilities in offering
	- Leverage IBM's reputation in education
	- Take targeted approach to SI/SO

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Conclusions
Recommendations

Subject Area	Conclusions/Recommendations
Competition	*Conclusions* - Highly diverse in professional services - No clear leaders in most segments - Executive consulting dominated by "Big Six" - Software houses play unusually strong role - No one with dominant market share in any segment *Recommendations* - Go against accounting and software firms with solution packages (manufacturing) - Consider long-term agreements for applications portfolio maintenance - Further analyze pricing strategy against CRG's and other body shops

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Perceptions of IBM Potential

- Competitive Advantages
  - General reputation
  - Depth of resources available
- Competitive Disadvantages
  - Perceived parochialism
  - Lack of experience in multivendor environments
  - Cost
  - Perceived lack of industry expertise
  - Lack of industry-specific applications software

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Markets and Issues

- Markets To Avoid
  - General applications programming
  - Modification of non-IBM packages
- Attractive Markets
  - Mainframe systems programming
  - SI/SO, downsizing, infrastructure migration

Key Issue: Willingness to support multivendor offering. Hardware/Network/Software/Packages

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About INPUT

INPUT provides planning information, analysis, and recommendations for the information technology industries. Through market research, technology forecasting, and competitive analysis, INPUT supports client management in making informed decisions.

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